In the claims:

1-40 (Presently canceled)

41 (Presently added): A method for identifying a compound capable of treating a cellular growth or proliferation disorder, the method comprising:

a) contacting a polypeptide comprising an amino acid sequence which is at least 95% identical to the amino acid sequence of SEQ ID NO:2, to the amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Patent Deposit Number PTA-3439, or to a fragment comprising at least 100 amino acids of SEQ ID NO:2, with a test compound under conditions suitable for binding, wherein the polypeptide or fragment thereof has dehydrogenase activity;

b) detecting binding of the test compound to the polypeptide to identify a test compound that binds to the polypeptide;

c) incubating the test compound which binds to the polypeptide with cancer cells; and

d) determining cellular growth or proliferation of the cancer cells to thereby identify a compound capable of treating a cellular growth or proliferation disorder.

42 (Presently added): A method for identifying a compound capable of treating a cellular growth or proliferation disorder, the method comprising:

a) contacting a polypeptide comprising the amino acid sequence of SEQ ID NO:2, the amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Patent Deposit Number PTA-3439, or a fragment comprising at least 100 amino acids of SEQ ID NO:2 having dehydrogenase activity, with a test compound under conditions suitable for binding;

b) detecting binding of the test compound to the polypeptide to identify a test compound that binds to the polypeptide;

c) incubating the test compound which binds to the polypeptide with cancer cells; and

d) determining cellular growth or proliferation of the cancer cells to thereby identify a compound capable of treating a cellular growth or proliferation disorder.

43 (Presently added): A method for identifying a compound capable of treating a cellular growth or proliferation disorder, wherein the cellular growth or proliferation disorder is selected from the group consisting of lung cancer, breast cancer, ovarian cancer and colon cancer, the method comprising:

a) contacting a polypeptide comprising an amino acid sequence which is at least 95% identical to the amino acid sequence of SEQ ID NO:2, to the amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Patent Deposit Number PTA-3439, or to a fragment comprising at least 100 amino acids of SEQ ID NO:2, with a test compound under conditions suitable for binding, wherein the polypeptide or fragment thereof has dehydrogenase activity;

b) detecting binding of the test compound to the polypeptide to identify a test compound that binds to the polypeptide;

c) incubating the test compound which binds to the polypeptide with a cell selected from the group consisting of a lung cancer cell, a breast cancer cell, an ovarian cancer cell and a colon cancer cell; and

d) determining cellular growth or proliferation of the cancer cells to thereby identify a compound capable of treating lung cancer, breast cancer, ovarian cancer or colon cancer.

44 (Presently added): A method for identifying a compound capable of treating a cellular growth or proliferation disorder, wherein the cellular growth or proliferation disorder is selected from the group consisting of lung cancer, breast cancer, ovarian cancer and colon cancer, the method comprising:

a) contacting a polypeptide comprising the amino acid sequence of SEQ ID NO:2, the amino acid sequence encoded by the cDNA insert of the plasmid deposited with ATCC as Patent Deposit Number PTA-3439, or a fragment comprising at least 100 amino acids of SEQ ID NO:2 having dehydrogenase activity, with a test compound under conditions suitable for binding;

b) detecting binding of the test compound to the polypeptide to identify a test compound that binds to the polypeptide;

c) incubating the test compound which binds to the polypeptide with a cell selected from the group consisting of a lung cancer cell, a breast cancer cell, an ovarian cancer cell and a colon cancer cell; and

d) determining cellular growth or proliferation of the cancer cells to thereby identify a compound capable of treating lung cancer, breast cancer, ovarian cancer or colon cancer.

45 (Presently Added): The method of any one of claims 41, 42, 43 or 44, wherein the compound is a small molecule.

46 (Presently Added): The method of any one of claims 41 or 42, wherein the disorder is cancer.

47 (Presently Added): The method of any one of claims 41, 42, 43 or 44, wherein the polypeptide is encoded by the nucleotide sequence set forth in SEQ ID NO:1 or SEQ ID NO:3.

48 (Presently Added): The method of any one of claims 41, 42, 43 or 44, wherein the polypeptide further includes heterologous sequences.

49 (Presently Added): The method of any one of claims 41, 42, 43 or 44, wherein the binding of the test compound to the polypeptide is detected by a method selected from the group consisting of:

a) direct detecting of test compound/polypeptide binding;

b) a competition binding assay;

c) an immunoassay;

d) a yeast two-hybrid assay; and

e) an assay for dehydrogenation of Acyl-CoA esters.